

I CLAIM:

1. A textile interlacing jet comprising;
a body including a compressed air inlet;
5 an interlacing jet insert mounted on a jet carriage, the jet carriage being slidably mounted on the body so that the jet carriage can be shifted between an open position and a closed position in which the interlacing jet insert is aligned with the compressed air inlet; and
a spring housing assembly mounted on the body above the compressed air inlet,
10 and including at least one compression spring washer positioned to exert a force against the interlacing jet tending to retain the jet carriage on the body as the jet carriage slides between the open and closed positions.
2. The interlacing jet of claim 1 wherein a stack of compression spring washers, including the at least one compression spring washer, are positioned in the spring housing
15 assembly.
3. The interlacing jet of claim 2 wherein the compression spring washers comprise Belleville spring washers.
4. The interlacing jet of claim 1 wherein the spring housing assembly includes a spring housing including a cavity in which each compression spring washer is positioned.
- 20 5. The interlacing jet of claim 4 wherein the spring housing includes a plate in which the cavity is formed.
6. The interlacing jet of claim 5 wherein the cavity extends between top and bottom surfaces of the plate.
7. The interlacing jet of claim 5 wherein a retaining washer is positioned within the
25 cavity to secure one end of a stack of spring washers, including the at least one spring washer, within the cavity.
8. The interlacing jet of claim 7 wherein an opposite end of the stack of spring washers engages an opposing surface on the spring housing above the plate.
9. The interlacing jet of claim 7 wherein a pin extends through the spring housing
30 and engages an opposite end of the stack of spring washers to compress the spring washers.

10. The interlacing jet of claim 5 wherein a bottom layer, comprised of a material having a lower coefficient of friction than the plate is secured to a bottom surface of the plate.
11. A textile interlacing jet comprising:
- 5 an interlacing jet insert mounted on a jet carriage, slidably mounted on a body; the body comprising a base including a compressed air inlet extending through the base, and with an upper arm spaced from the base and extending over the base and over the compressed air inlet; and
- a compression spring attached to the upper arm above the compressed air inlet,
- 10 the compression spring pressing a slide layer into engagement with a top surface of the interlacing jet insert to retain the interlacing jet insert and the jet carriage as the jet carriage is moved linearly relative to the body.
12. The interlacing jet of claim 11 wherein the interlacing jet insert and the jet carriage can be removed from the body by only the application of a linear force to slide
- 15 the jet carriage off an distal end of the base.
13. The interlacing jet of claim 11 wherein the upper arm comprises a cantilever beam.
14. The interlacing jet of claim 11 wherein the base and the upper arm comprise parts of the same one piece member.
- 20 15. The interlacing jet of claim 14 wherein an upright rear arm extends between the base and the upper arm, which forms a cantilever beam extending from the upright rear arm.
16. The interlacing jet of claim 15 wherein the body comprises an extruded member, with the compressed air inlet machined in the base.
- 25 17. The interlacing jet of claim 16 wherein the body comprises an extruded aluminum member.
18. The interlacing jet of claim 11 wherein the compression spring is positioned within a spring housing that is attached to a distal end of the upper arm.
19. The interlacing jet of claim 18 wherein the spring housing is pinned to the upper
- 30 arm, so that the spring housing can rotate relative to the upper arm, to the base, to the interlacing jet insert and to the jet carriage.

20. The interlacing jet of claim 11 wherein the spring comprises a series of spring washers.

21. A textile interlacing jet comprising:

a body, having an upper section and a lower section in opposing relationship;

an interlacing jet insert;

a jet carriage, the interlacing jet insert being mounted on the jet carriage, the jet carriage being slideably mounted on the lower section of the body; and

a spring housing assembly, including a spring housing with a bottom layer and a spring positioned above the bottom layer; the spring housing assembly extending

between the upper section and the lower section of the body, the spring housing being attached to the upper section of the body by a pin so that the spring housing can rotate relative to the body with the spring being positioned to press the spring housing bottom layer against a top surface of the interlacing jet insert to retain the jet carriage on the body while permitting the interlacing jet and jet carriage to slide relative to the body and to the spring housing assembly.

22. The interlacing jet of claim 21 wherein the spring housing rotates to a tilted position in which the spring housing is positioned at an angle when the jet carriage and the interlacing jet insert are removed from the lower section of the body.

23. The interlacing jet of claim 22 wherein the spring housing rotates to a position in which the bottom layer of the spring housing is parallel to the lower body section when the jet carriage and the interlacing jet are inserted on the body.

24. The interlacing jet of claim 21 wherein the spring is compressed when the jet and the interlacing jet are inserted on the body.

25. The interlacing jet of claim 21 wherein the spring housing is tilted by insertion and extraction of the jet carriage, with a jet insert attached thereto, from the lower section of the body.

26. The interlacing jet of claim 21 wherein the upper and lower sections of the body comprise two arms spaced apart by a gap in which the jet carriage and the interlacing jet can be positioned.

27. The interlacing jet of claim 21 wherein the spring comprises at least one spring washer.

28. The interlacing jet of claim 21 wherein the spring housing bottom layer and the insulating jet insert are fabricated from the same material, which has a sufficiently low coefficient of friction so that the insulating jet insert can slide relative to the bottom layer.

29. The interlacing jet of claim 21 wherein the spring housing includes a yoke

5 extending into a recess on a distal end of the upper section of the body, the pin extending through the yoke and into portions of the upper section of the body on opposite sides of the recess, with the spring being trapped between the pin and the bottom layer.

30. The interlacing jet of claim 21 including a lever for imparting linear movement of the jet carriage between an open position and a closed position in which yarn strands can
10 be interlaced by high pressure injection of gas through the interlacing jet insert.